

I. AMENDMENTS TO THE CLAIMS:

Please cancel claims 32 and 40 without prejudice. Kindly amend claim 23, 27 and 28, and add new claims 46 and 47 as follows.

The following listing of claims will replace all prior versions of claims in the present application. No new matter has been added to the claims.

Listing of Claims:

Claims 1 to 22 have been cancelled.

23. (Currently amended) A watch including:

(a) a case containing a watch movement on which a dial is mounted, the watch movement including electronic circuits able to generate time signals to be sent to motor means controlling at least first and second analogue display members, wherein the analogue display members are arranged above the dial to display current time in a time mode that~~which~~ is a first operating mode; and ~~the watch further including~~

(b) a sensor for a physical magnitude, for periodic acquisition of value of the physical magnitude as a function of time in a second operating mode, wherein the sensor is connected to means for processing values capable of generating electric signals to storage means provided for storing values, wherein the watch has a historic mode that~~which~~ is a third operating mode in which the processing means are arranged for generating control signals to be sent to the motor means for a display representative of stored values of the physical magnitude as a function of time so that at least said first analogue display member indicates, opposite suitable graduations of the watch, the value of a variable, the change in which is linked to physical magnitude value, on condition that the variable does not give any indication relating to ~~the time~~ remaining before a decompression stop has to be made or any indication relating to a minimum depth not to be exceeded by a person wearing the watch

when coming up from a dive when said second analogue display member is made to indicate information relating to a depth.

24. (Cancelled)

25. (Previously Presented) The watch according to claim 23, wherein in said historic mode said processing means are further arranged for generating signals to be sent to said motor means so that said at least two analogue display members remain superposed.

26. (Cancelled)

27. (Currently amended) A watch including:

(a) a case containing a watch movement on which a dial is mounted, the watch movement including electronic circuits able to generate time signals to be sent to motor means controlling at least first and second analogue display members, wherein said analogue display members are arranged above the dial to display current time in a time mode that which is a first operating mode; and ~~the watch further including~~

(b) a sensor for a physical magnitude, for periodic acquisition of value of the physical magnitude as a function of time in a second operating mode, wherein the sensor is connected to means for processing values capable of generating electric signals to storage means provided for storing values, wherein the watch has a historic mode that which is a third operating mode in which the processing means are arranged for generating control signals to be sent to the motor means for a display representative of stored values of the physical magnitude as a function of time so that said first analogue display member indicates, opposite suitable graduations of the watch, the value of a variable, the change in which is linked to

physical magnitude value, on condition that the variable does not give any indication relating to the time remaining before a decompression stop has to be made or any indication relating to a minimum depth not to be exceeded by a person wearing the watch when coming up from a dive when said second analogue display member is made to indicate information relating to a depth, and wherein in said historic mode, said processing means are further arranged for generating signals to be sent to said motor means so that at a given instant said second analogue display member indicates elapsed time since the start of acquisition of value of physical magnitude as a function of time, whereas said first analogue display member indicates value of the variable at said instant.

28. (Currently amended) A watch including:

(a) a case containing a watch movement on which a dial is mounted, the watch movement including electronic circuits able to generate time signals to be sent to motor means controlling at least first and second analogue display members, wherein the analogue display members are arranged above the dial to display current time in a time mode that which is a first operating mode; and ~~the watch further including~~

(b) a sensor for a physical magnitude, for periodic acquisition of value of the physical magnitude as a function of time in a second operating mode, wherein the sensor is connected to means for processing values capable of generating electric signals to storage means provided for storing values, wherein the watch has a historic mode that which is a third operating mode in which the processing means are arranged for generating control signals to be sent to the motor means for a display representative of stored values of the physical magnitude as a function of time so that the first analogue display member indicates, opposite suitable graduations of the watch, the value of a variable, the change in which is linked to physical magnitude value, on condition that the variable does not give any indication relating

to the time remaining before a decompression stop has to be made or any indication relating to a minimum depth not to be exceeded by a person wearing the watch when coming up from a dive when the second analogue display is made to indicate information relating to a depth, and wherein the device includes additional means for calculating value of a second variable from said measured value of physical magnitude, wherein said processing means is arranged for generating signals to be sent to said motor means so that said second analogue display member indicates at each instant, in said historic mode, the value of the second variable corresponding to the value of the variable displayed by said first analogue display member.

29. (Previously Presented) The watch according to claim 23, wherein said sensor is a magnetic field sensor, wherein in said historic mode, said processing means are arranged for generating signals to be sent to said motor means so that said first and second analogue display members are aligned so as to indicate magnetic north.

30. (Previously Presented) The watch according to claim 23, wherein said sensor is an ambient pressure sensor.

31. (Previously Presented) The watch according to claim 30, wherein said first analogue display member indicates a measured depth.

32. (Cancelled)

33. (Previously Presented) The watch according to claim 30, wherein said first analogue display member indicates a measured altitude.

34. (Previously Presented) The watch according to claim 33, wherein said second analogue display member indicates an altitude difference value.

35. (Previously Presented) The watch according to claim 30, wherein said first analogue display member indicates a substantially instantaneous altitude variation speed.

36. (Previously Presented) The watch according to claim 35, wherein additional means are provided for generating signals to be sent to said control means so that said second analogue display member further indicates, in said historic mode and at a given instant, a mean altitude variation speed calculated over a predefined period of time preceding said given instant.

37. (Previously Presented) The watch according to claim 23, wherein the watch includes a temperature sensor for measuring a physical magnitude representative of ambient temperature, said electronic circuits being capable of storing measurements of said temperature sensor to generate electric signals to be sent to said motor means so that one of said first and second analogue display members indicates temperature value in said historic mode.

38. (Previously Presented) The watch according to claim 23, wherein in said second operating mode, said processing means are arranged for generating signals to be sent to said motor means so that, during the course of said acquisition of the value of the physical magnitude, the display of the watch is identical to the current time displayed by said first and second analogue display members in the time mode.

39. (Previously Presented) The watch according to claim 23, wherein in said second operating mode, said processing means are arranged for generating signals to be sent to said motor means so that said first analogue display member displays the value of said variable substantially in real time.

40. (Cancelled)

41. (Previously Presented) The watch according to claim 23, wherein said electronic circuits are arranged for periodically storing said measured values in said second operating mode.

42. (Previously Presented) The watch according to claim 41, wherein said electronic circuits are arranged for altering the storage interval of said measured values as a function of the actual duration of said acquisition of the value of the physical magnitude.

43. (Previously Presented) The watch according to claim 23, wherein the watch further includes a liquid crystal display for displaying complementary information to indications provided by said at least two analogue display means.

Claims 44 and 45 have been cancelled.

46. (NEW) A watch including:

(a) a case containing a watch movement on which a dial is mounted, the watch movement including electronic circuits able to generate time signals to be sent to motor means controlling at least first and second analogue display members, wherein the analogue

display members are arranged above the dial to display current time in a time mode that is a first operating mode;

(b) a sensor for a physical magnitude, for periodic acquisition of value of the physical magnitude as a function of time in a second operating mode, wherein said sensor is an ambient pressure sensor; and

(c) means for automatically activating said second operating mode from said time mode in response to immersion of the watch in water, wherein the sensor is connected to means for processing values capable of generating electric signals to storage means provided for storing values, wherein the watch has a historic mode that is a third operating mode in which the processing means are arranged for generating control signals to be sent to the motor means for a display representative of stored values of the physical magnitude as a function of time so that at least said first analogue display member indicates, opposite suitable graduations of the watch, the value of a variable, the change in which is linked to physical magnitude value on condition that the variable does not give any indication relating to time remaining before a decompression stop has to be made or any indication relating to a minimum depth not to be exceeded by a person wearing the watch when coming up from a dive when said second analogue display member is made to indicate information relating to a depth and said first analogue display member indicates a measured depth.

47. (NEW) A watch including:

(a) a case containing a watch movement on which a dial is mounted, the watch movement including electronic circuits able to generate time signals to be sent to motor means controlling at least first and second analogue display members, wherein the analogue display members are arranged above the dial to display current time in a time mode that is a first operating mode;

(b) a sensor for a physical magnitude, for periodic acquisition of value of the physical magnitude as a function of time in a second operating mode, wherein the sensor is connected to means for processing values capable of generating electric signals to storage means provided for storing values, wherein the watch has a historic mode that is a third operating mode in which the processing means are arranged for generating control signals to be sent to the motor means for a display representative of stored values of the physical magnitude as a function of time so that at least said first analogue display member indicates, opposite suitable graduations of the watch, the value of a variable, the change in which is linked to physical magnitude value on condition that the variable does not give any indication relating to time remaining before a decompression stop has to be made or any indication relating to a minimum depth not to be exceeded by a person wearing the watch when coming up from a dive when said second analogue display member is made to indicate information relating to a depth, and

wherein in said historic mode, said electronic circuits are capable of operating said motor means so that the display of the value of said variable as a function of time is performed over a predefined maximum period of time, so that when actual duration of said acquisition of the value of the physical magnitude is greater than said predefined period of time, the value of said variable as a function of time is displayed in an accelerated manner.